

AMENDMENTS

Amendments to the Specification:

Please insert the following replacement paragraphs:

[0178] VEGF-A165, bFGF, and TGF- α were from R&D Systems (Minneapolis, MN) and anti-CD31 antibody from BD-Pharmingen (San Diego, CA). RC38 (Schlingemann et al., 1996), ASD-37, ASD-41 (Assmann et al., 1992) and PAL-E antibody (Schlingemann et al., 1985) have been described. Synthetic peptides were purchased from AnaSpec (San Jose, CA). Unless otherwise indicated, an unrelated synthetic peptide (sequence GACVRLSACGA SEQ ID NO:7) was used as a negative control. A phage display random peptide library displaying the insert CX3CX3CX3C (SEQ ID NO:14) (C, cysteine; X, any amino acid residue) was constructed as described (Smith and Scott, 1993).

[0183] The inventors pre adsorbed 1010 transducing units (TU) of a CX3CX3CX3C (SEQ ID NO:14) (C, cysteine; X, any amino acid residue) phage display random library on SK-RC-49 parental cells. Next, the pre-cleared CX3CX3CX3C (SEQ ID NO:14) phage library (~1010 TU) was added to 106 detached APA-transfected SK-RC-49 cells in binding medium (20 mM HEPES, 2% FCS in DMEM). Cell panning was performed at 4 °C to minimize post-binding events such as receptor-mediated internalization (Giordano et al., 2001). Cells were washed with binding medium and cell bound phage were recovered and amplified by infection of K91Kan E. coli. Serial dilutions were plated on Luria-Bertani (LB) agar plates with tetracycline and kanamycin. The number of TU was determined by bacterial colony counting.

[0203] To identify peptides capable of binding to APA, the inventors screened APA-transfected cells with a phage display library (Smith and Scott, 1993). The inventors stably transfected SK-RC-49 renal carcinoma cells with a vector expressing full-length APA cDNA. APA functionality was verified in transfected cells by an enzyme activity assay specific for APA. Parental SK-RC-49 cells showed neither APA expression nor activity. An increase in phage binding to SK-RC-49/APA cells relative to SK-RC-49 cells was observed in the third round of selection (FIG. 2A). DNA sequencing revealed an enrichment of the sequence CYNLCIRECESIC-GADGA-CWTWCADGCSRSC (SEQ ID NO:9) containing tandem repeats

of the general library sequence CX₃CX₃CX₃C (SEQ ID NO:14) on each side of the pIII peptide linker GADGA sequence. 50% of randomly selected phage clones displayed such tandem repeat after the second round and 100% displayed it after the third round (Table 1).

Please delete the Sequence Listing numbered pages 1 through 4 and insert therefor the Substitute Sequence Listing numbered pages 1 through 4 as submitted electronically herewith as text.